KENWOOD

GRAPHIC EQUALIZER

G-EQ300

INSTRUCTION MANUAL

KENWOOD CORPORATION

B60-3538-08 (KO) (K,P,Y,C,M,X,T) MC

Before applying power

⚠ *Caution : Read this section carefully to ensure safe operation.*

Units are designed for operation as follows.

U.S.A. and Canada ..... ***AC 120 V only***
Australia ..... ***AC 240 V only***
China ..... ***AC 220 V only***
U.K. and Europe ..... ***AC 230 V only***
****Other countries*** ..... ***AC 110-120 / 220-240 V switchable***

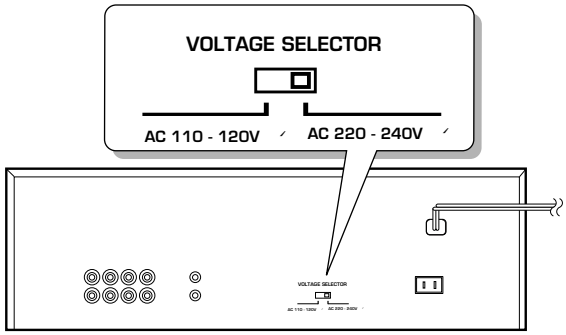
**AC voltage selection*

The AC voltage selector switch on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

Note

Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

AC voltage selector switch



Move switch lever to match your line voltage with a small screwdriver or other pointed tool.

For the United Kingdom

Factory fitted moulded mains plug

1. The mains plug contains a fuse. For replacement, use only a 13- Amp ASTA-approved (BS1362) fuse.
2. The fuse cover must be refitted when replacing the fuse in the moulded plug.
3. Do not cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appro priate safety approved extension lead or adapter, or consult your dealer.If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

IMPORTANT :
The wires in the mains lead are coloured in accordance with the following code :
Blue : Neutral
Brown : Live
Do not connect those leads to the earth terminal of a three - pin plug.

Safety precautions

⚠ *Caution : Read this section carefully to ensure safe operation.*

WARNING : TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
	THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.
	THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

Special features

Large FL display, 14-band equalizer and 27-spectrum analyzer

The large FL display, 14-band equalizer and 27-spectrum analyzer features high visibility of information and make it possible to set EQ (equalizer) curves with high accuracy.

MANUAL/REFERENCE modes

MANUAL: Five preset patterns have been factory-preset for this mode, too. In this mode, it is also possible to preset (assign) equalizer patterns created by the user in place of the factory presets. →12

REFERENCE: Five exemplary patterns have been preset at the factory. →13

PARAMETRIC/GRAPHIC modes

PARAMETRIC: Equalizer curves can be created by setting up to 3 center frequencies and the equalizing levels for them. →15

GRAPHIC: The equalizer curve can be adjusted in a detailed way for every frequency range. It is also possible to fine-adjust a curve which has been created in the PARAMETRIC mode. The GRAPHIC mode is to be used when detailed adjustment of acoustic compensation is required. →17

GENRE mode

A total of 30 playback patterns have been factory-preset by combining five recommended equalizer patterns with six music genres, so that any of them can be selected by actually comparing them. Similarly, selection from 30 types of recording patterns for playback on car stereo or from 30 types of recording patterns for playback on headphone stereo is also available. Select the optimum equalizer pattern according to the music genre and purpose of use of the pattern. →19

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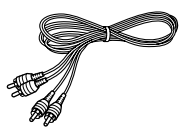
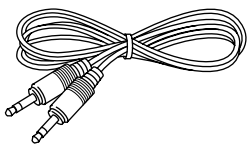
Accessories

Check that the following accessories are present.

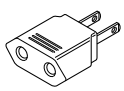
Audio cord (2)



System control cord (1)



* AC plug adaptor (1)



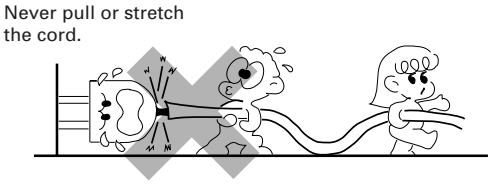
* Use to adapt the plug on the power cord to the shape of the wall outlet. (Accessory only for regions where use is necessary.)

⚠ *Caution : Read this page carefully to ensure safe operation.*

Please read all of the safety and operating instructions before operating this appliance. Adhere to all warnings on the appliance and in the instruction manual. Follow all the safety and operating instructions. These safety and operating instructions should be retained for future reference.

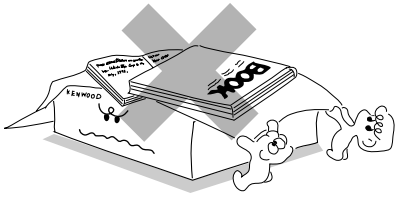
1. **Power sources** – The appliance should be connected to a power supply only of the type described in the instruction manual or as marked on the appliance. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For appliances intended to operate from battery power, or other sources, refer to the instruction manual.

2. **Power-cord protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.



3. **CAUTION – Polarization** – This appliance may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

4. **Ventilation** – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the appliance and to protect it from overheating, and these openings must not be blocked or covered. The appliance should be situated so that its location or position does not interfere with its proper ventilation.
   To maintain good ventilation, do not put records or a table-cloth on the appliance. Place the appliance at least 10 cm away from the walls.
   Do not use the appliance on a bed, sofa, rug or similar surface that may block the ventilation openings. This appliance should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

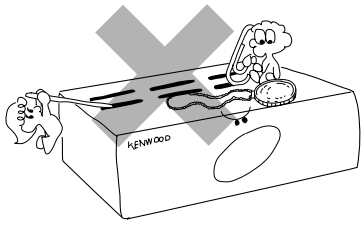


5. **Water and moisture** – The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

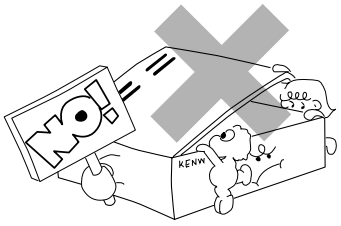
6. **Temperature** – The appliance may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

7. **Heat** – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

8. **Electric shock** – Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal objects, such as a hair pin or a needle, comes into contact with the inside of this appliance, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this appliance.



9. **Enclosure removal** – Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.



10. **Magnetic fields** – Keep the appliance away from sources of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.

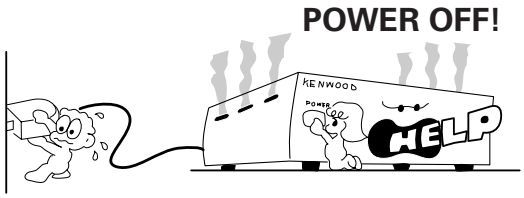
11. **Cleaning** – Unplug this appliance from the wall outlet before cleaning. Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzine, etc. to clean the cabinet. Use a clean dry cloth.

12. **Accessories** – Do not place this appliance on an unstable cart, stand, tripod, bracket, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the appliance. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

⚠ *Caution : Read this page carefully to ensure safe operation.*

13. **Lightning** – For added protection for this appliance during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the appliance due to lightning and power-line surges.

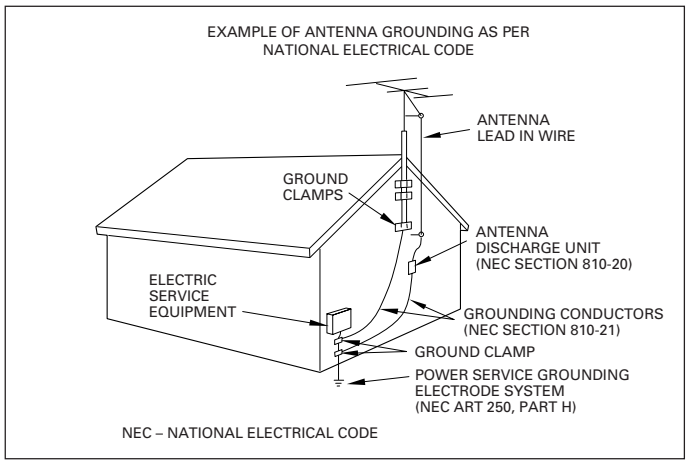
14. **Abnormal smell** – If an abnormal smell or smoke is detected, immediately turn the power OFF and unplug the appliance from the wall outlet. Contact your dealer or nearest service center.



15. **Damage requiring service** – The appliance should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged.
    B. Objects have fallen, or liquid has been spilled into the appliance.
    C. The appliance has been exposed to rain or water.
    D. The appliance does not appear to operate normally by following the instruction manual. Adjust only those controls that are covered by the instruction manual as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to its normal operation.
    E. The appliance has been dropped, or the enclosure damaged.
    F. The appliance exhibits a marked change in performance.

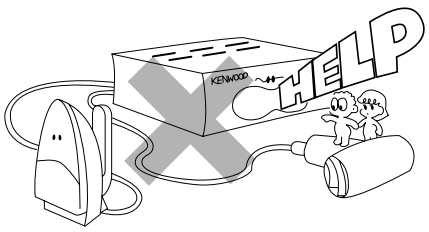
16. **Servicing** – The user should not attempt to service the appliance beyond that described in the instruction manual. All other servicing should be referred to qualified service personnel.

17. **Outdoor antenna grounding** – If an outside antenna is connected to the appliance, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Article 810 of the National Electrical Code ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.


EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE
ANTENNA LEAD IN WIRE
GROUND CLAMPS
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMP
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)
NEC – NATIONAL ELECTRICAL CODE

18. **Power lines** – An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

19. **AC outlets** – Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical appliances, such as an iron or toaster, to it to prevent fire or electric shock.



20. **Overloading** – Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

21. **Attachment** – Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.

22. **Replacement parts** – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.

23. **Safety check** – Upon completion of any service or repairs to this appliance, ask the service technician to perform safety checks to determine that the appliance is in proper operating condition.

Notes

1. Item 3 is not required except for grounded or polarized equipment.
2. Item 17 and 18 are not required except for units provided with antenna terminals.
3. Item 17 complies with UL in the U.S.A.

Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost.
Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.
We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

Keep this manual handy for future reference.

Safety precautions

Beware of condensation

When water vapor comes into contact with the surface of cold material, water drops are produced.
If condensation occurs, correct operation may not be possible, or the unit may not function correctly.
This is not a malfunction, however, the unit should be dried.
(To do this, turn the **ON/STANDBY** switch ON and leave the unit as it is for several hours.)

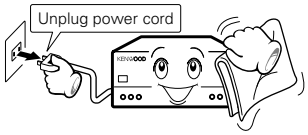
Be especially careful in the following conditions:

- When the unit is brought from a cold place to a warm place, and there is a large temperature difference.
- When a heater starts operating.
- When the unit is brought from an air-conditioned place to a place of high temperature with high humidity.
- When there is a large difference between the internal temperature of the unit and the ambient temperature, or in conditions where condensation occurs easily.

Maintenance

Cleaning

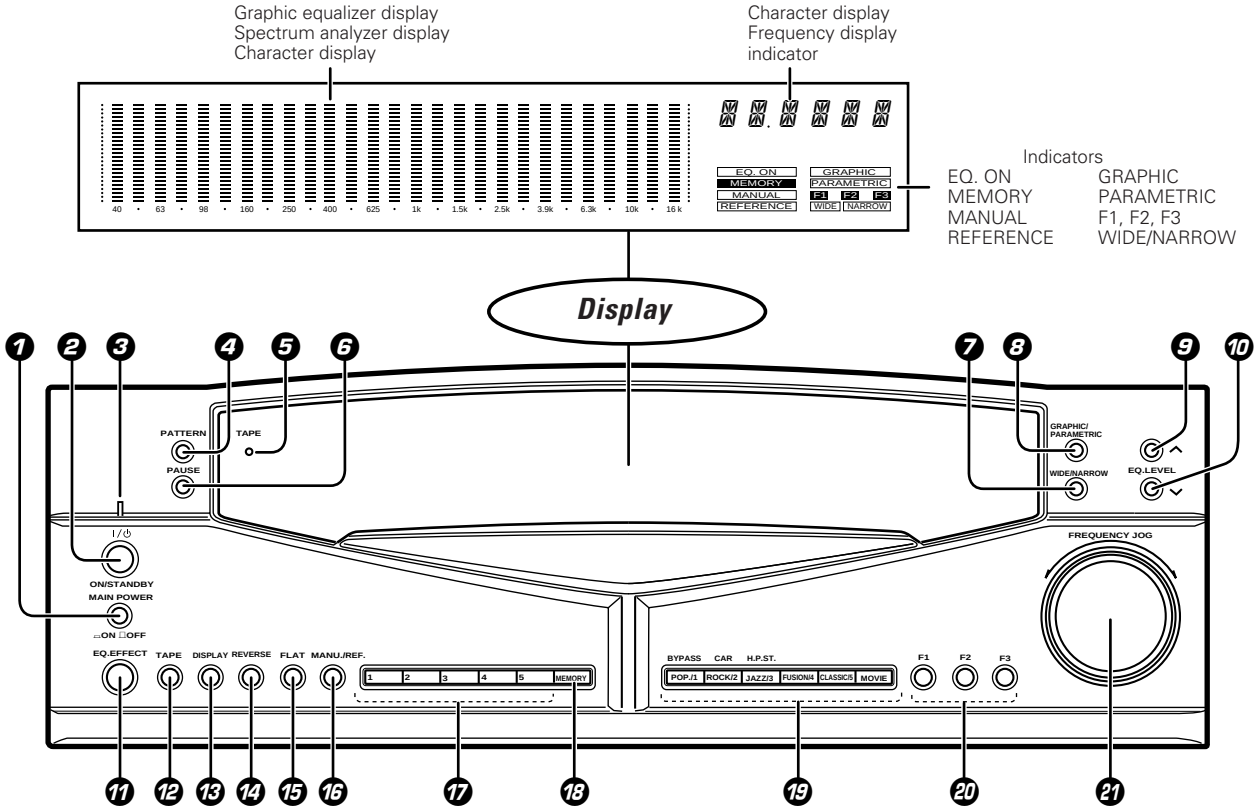
Unplug this appliance from the wall outlet before cleaning. Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzine, etc. to clean the cabinet. Use a clean dry cloth.



Caution against contact revitalizer

Do not use contact cleaners because it could cause a malfunction. Be specially careful against contact cleaners containing oil, for they may deform the plastic componente.

Names and functions of parts



❶ **MAIN POWER key**
Switch the unit ON mode.

❷ **ON/STANDBY key**
Switch the unit between ON mode and STANDBY mode.

❸ **Standby indicator**
Lights up to indicate that a small amount of current flows in the unit.

❹ **PATTERN key**
Press to enter or quit the genre mode.

❺ **TAPE indicator**
Lights up when the **TAPE** key is pressed to ON.

❻ **PAUSE key**
Press to let an equalizer curve pause temporarily.

❼ **WIDE/NARROW key**
Each press of the key switches the curve slope alternately between WIDE and NARROW.

❽ **GRAPHIC/PARAMETRIC key**
GRAPHIC: Select this mode when adjusting an equalizer curve.
PARAMETRIC: Select this mode when creating an equalizer curve according to center frequencies.

❾❿ **EQ. LEVEL ∧ (UP) / ∨ (DOWN) keys**
Press the ∧ (UP) or ∨ (DOWN) key to increase or decrease the equalizer level.

⓫ **EQ. EFFECT key**
Press to turn the equalizer mode ON and OFF.

⓬ **TAPE key**
Use when playing back or recording a tape.

⓭ **DISPLAY key**
Press to switch the display mode or to select the demonstration mode.

⓮ **REVERSE key**
Press to reverse an equalizer curve.

⓯ **FLAT key**
Press to make an equalizer curve flat.

⓰ **MANU./REF. key**
Press to switch the manual and reference functions alternately.

⓱ **Preset keys (1 to 5)**
Typical equalizer patterns have been preset under these keys so that you can select any one of them easily.

⓲ **MEMORY key**
Press this key when registering a user-created equalizer pattern.

⓳ **Genre keys**
Press in the genre mode to select the desired music genres and their equalizer patterns.

⓴ **Frequency keys (F1, F2, F3)**
Each key can store a desired center frequency.

㉑ **FREQUENCY JOG knob**
Rotate the control knob to adjust the frequency band (range).

STANDBY indicator

While standby mode is indicated, a small amount of power is supplied to the system to back up the memory. In this mode, the system can be turned ON by remote control.

System connections

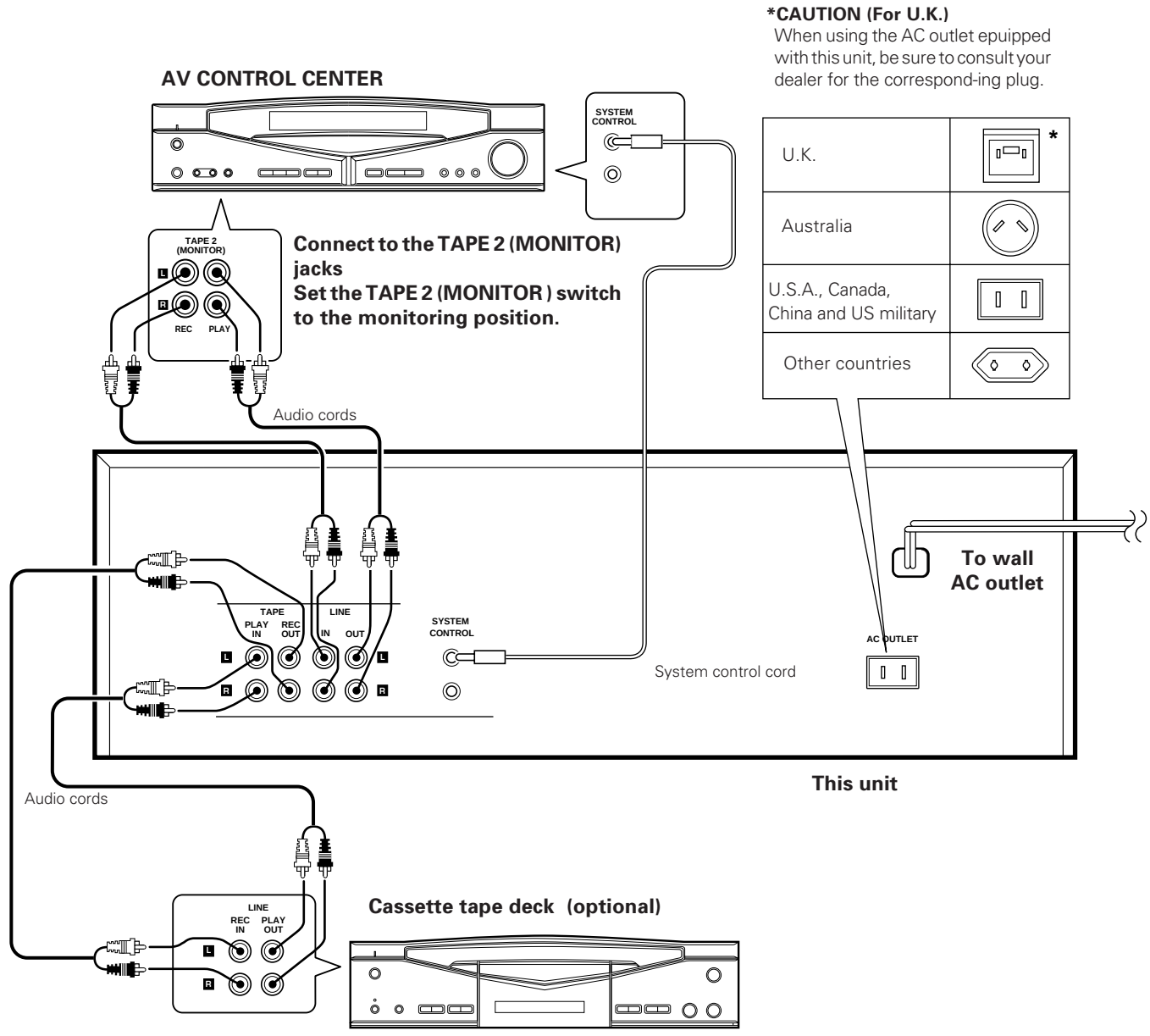
Make connection as shown below. When connecting the related system components, refer also to the instruction manuals of the related components.
⚠ Caution: Do not plug in the power lead until all connections are completed.

Malfunction of microprocessor
If operation is not possible or erroneous display appears even though all connections have been made properly, reset the microprocessor referring to "In case of difficulty".
→24

Caution regarding placement (Except for U.S.A., Canada)

To maintain proper ventilation, be sure to leave a space around the unit (from the largest outer dimensions including projections) equal to, or greater than, shown below.
Left and right panels: 10 cm, rear panel: 10 cm

***CAUTION (For U.K.)**
When using the AC outlet epuipped with this unit, be sure to consult your dealer for the correspond-ing plug.



Use the numbers ❾ ❿ ⓫ ⓬ on the rear panel of this unit when connecting it to an AV CONTROL CENTER or RECEIVER.
Connections are easily completed by using Audio cords to make connections to the same numbers on the other component.

÷When a cassette deck is connected to the graphic equalizer,do not connect the system control cord to the cassette deck.

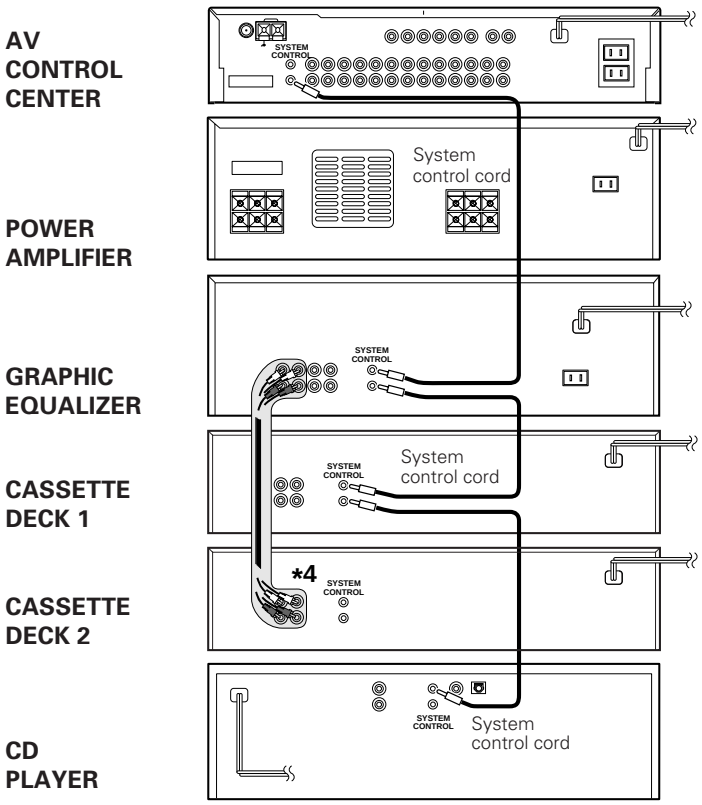
÷When connecting the audio cords (cords with pin plugs on each end), insert the white plugs into the L (Left) jacks and red plugs into the R (Right) jacks.

Notes
1. Connect all cords firmly. If connections are loose there could be loss of sound or noise produced.
2. When plugging and unplugging connection cords, be sure to first remove the power cord from the AC outlet. Plugging/unplugging connection cords without removal of the power cord can cause malfunctions or damage on the unit.
3. Do not connect up a power source which is larger than that indicated on the socket at the rear of the unit.

About the system control connections

When this unit is connected to KENWOOD audio component system "SERIES 21", also connect them through the system control cords to allow system-control operations between components.

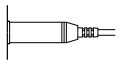
Connection example



The SERIES 21 components which can be system-connected with this unit include the LD player, MD recorder and DVD player.

Notes

1. Do not connect the SERIES 21 components to other system components using system control cords.
2. Do not connect system control cords to any components other than those specified by KENWOOD. It may cause a malfunction and damage your equipment.
3. Be sure the system control plugs are inserted all the way in to the system control terminals.



***4.** When a cassette deck is connected to the graphic equalizer, do not connect the system control cord to the cassette deck.

About the system control operations

(Available operations when SERIES 21 components are connected through system control cords)

Remote Control

Lets you operate source components with the system remote supplied with AV CONTROL CENTER.

Automatic Operation

When you start playback from a source component, the input selector on AV CONTROL CENTER switches to that component automatically. (Except TAPE 2)

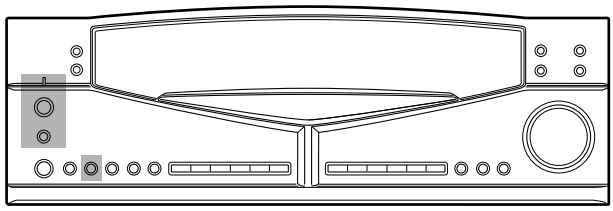
Synchronized Recording

Lets you synchronize recording with the start of playback when recording from CD or LD .

Display

Preparation

●Ensure that the **MAIN POWER** key is set to **ON**.



: Keys and control used in the operations described on this page.

Switching the display modes

1 Press the ON/STANDBY key to turn the unit ON.

2 Select the desired display mode.

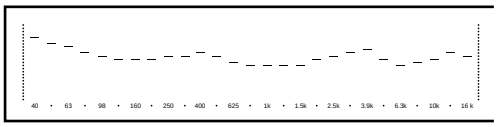
Each press switches the display modes as follows.

→ ① Graphic equalizer display mode
② Spectrum analyzer display mode
③ DEMO(Demonstration) mode

Graphic equalizer display mode

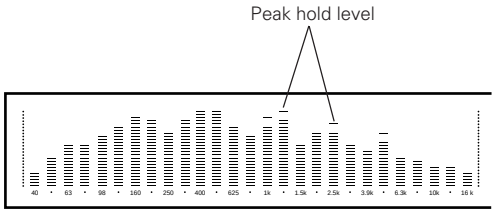
Shows how each frequency range is compensated.
The graphic equalizer display also appears for about 5 seconds, even while the unit is in the spectrum analyzer display mode, when one of the following operation is performed.

1. Turning the unit ON.
2. An operation key associated with an equalizer operation is pressed.



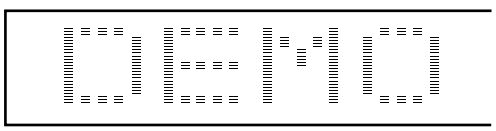
Spectrum analyzer display mode

Displays the frequency distribution of the source being played to allow under standing at a glance.
The peak value of the varying level of each frequency range is held and displayed for about 0.5 second.

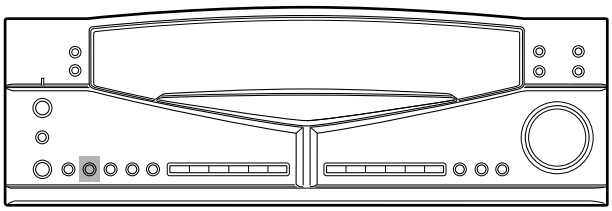


DEMO(Demonstration) mode

After "DEMO" is displayed, the demonstration of the graphic equalizer curves starts.



Demonstration of equalizer curves can be displayed to help the user understand the features of the equalizer better.

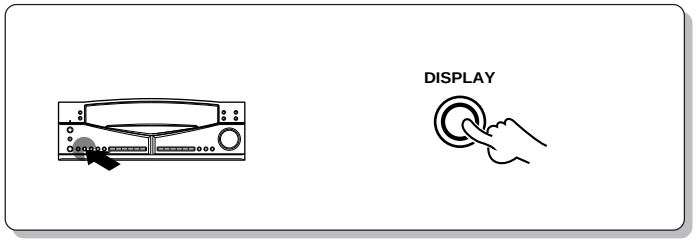


: Keys and control used in the operations described on this page.

Demonstration method

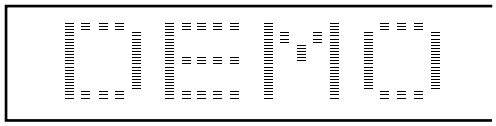
1 Play a music source.

2 Select the "DEMO" mode.

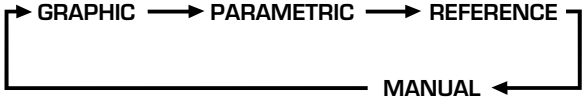


Each press switches the display modes as follows.

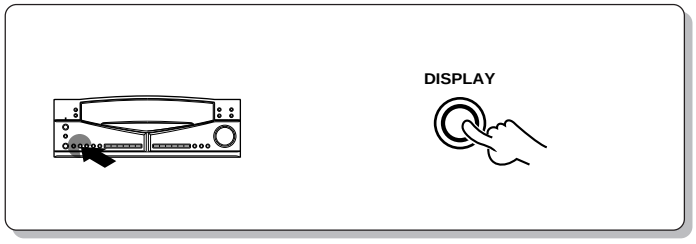
① Graphic equalizer display mode
② Spectrum analyzer display mode
③ **DEMO**(Demonstration) mode



Demonstration is performed repeatedly in the following order.

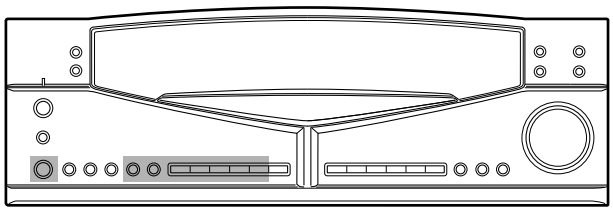


To stop demonstration



Operation of graphic equalizer

Five preset patterns have been factory-preset for this mode, too. In this mode, it is also possible to preset (assign) equalizer patterns created by the user in place of the factory presets.

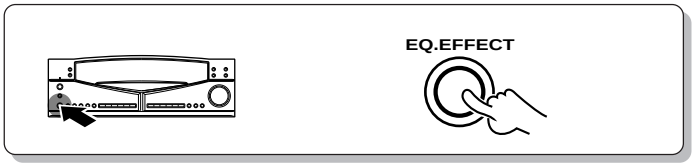


: Keys and control used in the operations described on this page.

Operation of MANUAL feature

1 Play a music source.

2 Select the "EQ.ON" mode.



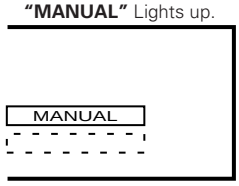
"EQ.ON" Lights up.

3 Set to "MANUAL".

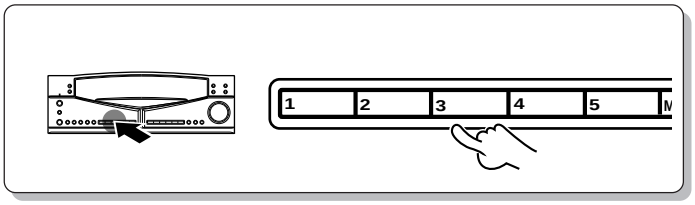
Each press switches the display as follows.

① **MANUAL**
② **REFERENCE**

"MANUAL" Lights up.



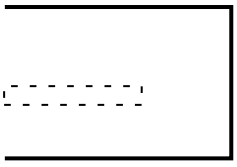
4 Select an equalizer pattern.



Select by pressing one of preset keys 1 to 5.

To cancel the equalizer effect:

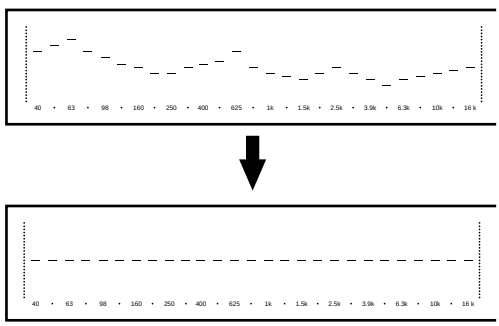
"EQ.ON" indicator goes off.



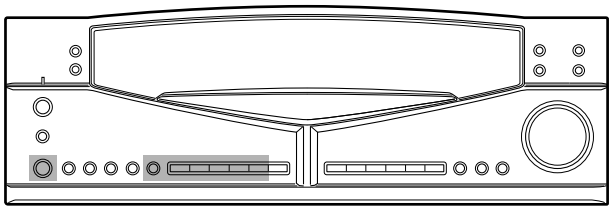
●The pattern being displayed remains the same.

"FLAT" key

Pressing the FLAT key makes the displayed curve flat. This occurs in any mode.



Five exemplary patterns have been preset at the factory.



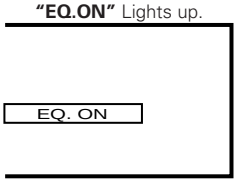
: Keys and control used in the operations described on this page.

Operation of REFERENCE feature

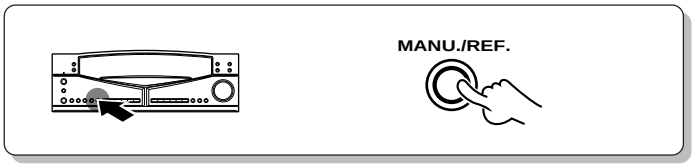
1 Play a music source.

2 Select the "EQ.ON" mode.

"EQ.ON" Lights up.



3 Set to "REFERENCE".

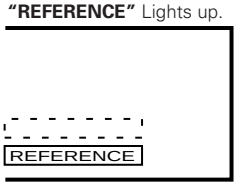


Each press switches the display as follows.

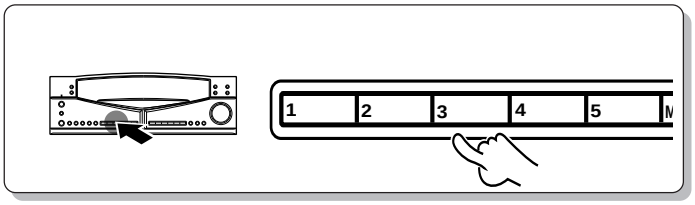
① **MANUAL**

② **REFERENCE**

"REFERENCE" Lights up.



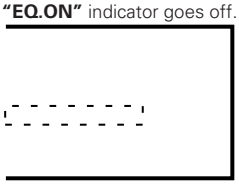
4 Select an equalizer pattern.



Select by pressing one of preset keys 1 to 5.

To cancel the equalizer effect:

"EQ.ON" indicator goes off.



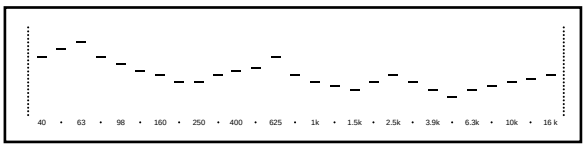
●The pattern being displayed remains the same.

Equalizer pattern list

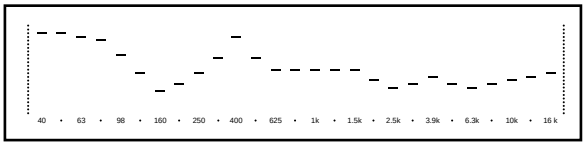
Preset equalizer pattern M1 to M5 (MANUAL)

Pattern can be created and preset by the user in this mode.

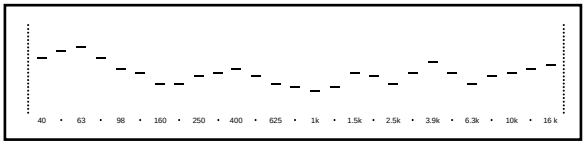
M1: [Bass intensity]
For listening a bass sound effect without feeling of sharpness.



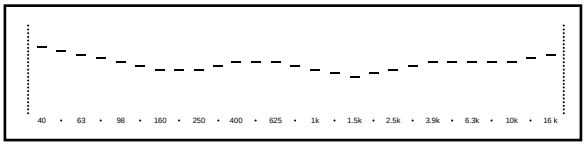
M2: [Vocal]
For listening vocal sound with enhanced expansion.



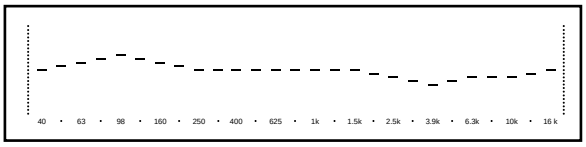
M3: [Percussion]
For listening percussion sound with expansion and powerfulness.



M4: [Car]
For recording tape with suitable tone to be played on car stereo.

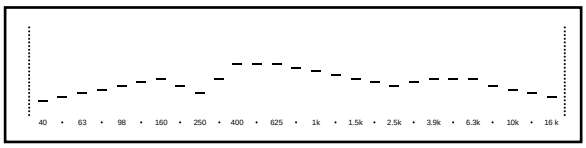


M5: [Headphones]
For recording tape with suitable tone to be played on headphone stereo.

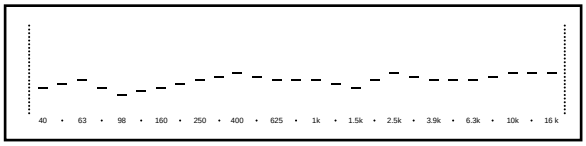


Preset equalizer pattern R1 to R5 (REFERENCE)

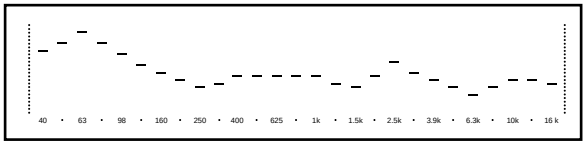
R1: [Mild]
For listening a mild sound comfortable for ears, like back ground music.



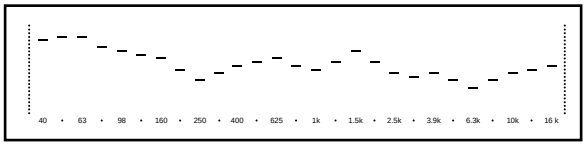
R2: [Clear]
For listening a brilliant sound with attenuated low frequencies.



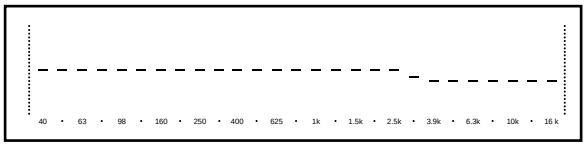
R3: [Heavy]
For listening music like rock and fusion with more powerful sound.



R4: [Scale]
For listening more exciting sound.

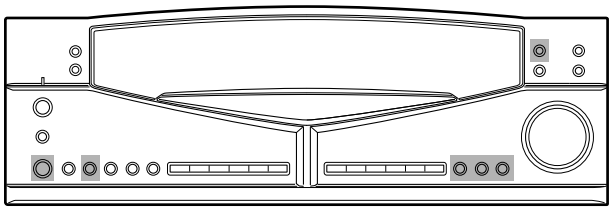


R5: [Noise reduction for recording]
Cut off stimulating medium and high frequencies and enables softsound recording.



Creation of desired equalizer patterns

Equalizer curves can be created by setting up to 3 center frequencies and the equalizing levels for them.
The inclination of each curve can be selected between WIDE (gentle slope) and NARROW (steep).



: Keys and control used in the operations described on this page.

Operation in PARAMETRIC mode

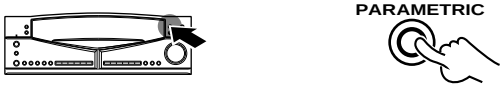
1 Select the "graphic equalizer display mode".

Each press switches the display modes as follows.
① Graphic equalizer display mode
② Spectrum analyzer display mode
③ DEMO(Demonstration) mode

2 Select the "EQ.ON" mode.

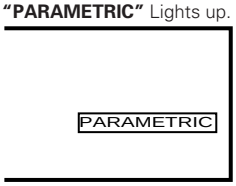
"EQ. ON" Lights up.

3 Select the "PARAMETRIC" mode

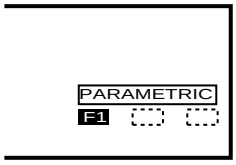


Each press switches the display as follows.
① **GRAPHIC** : Mode for adjusting equalizer curves.
② **PARAMETRIC**: Mode for creating a curve according to center frequencies.

"PARAMETRIC" Lights up.



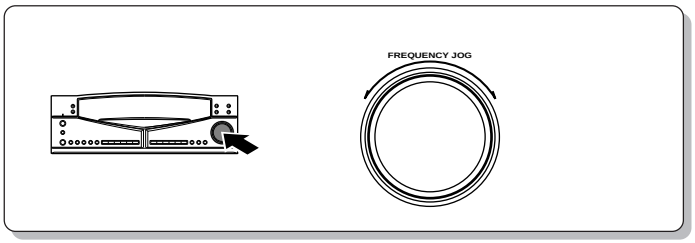
4 Select the key to store the center frequency.

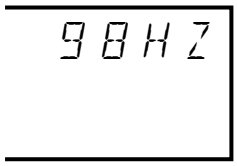


"F1" Lights up.

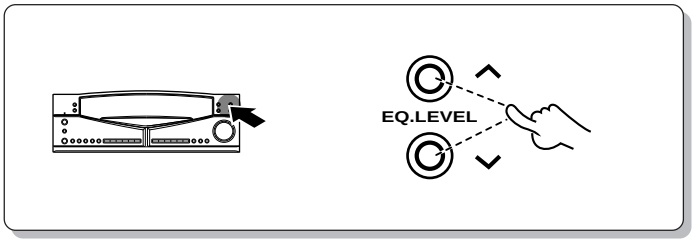
(Continued on next page)

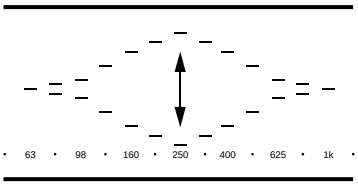
5 Select the center frequency.





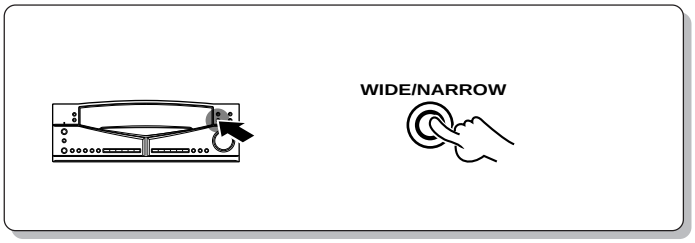
6 Adjust the level.





●Pressing the **FLAT** key allows to start adjustment from the flat level position.

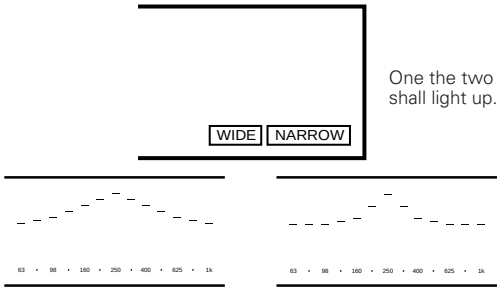
7 Select the inclination of the curve.



Each press switches the display as follows.

① **WIDE** : Curve with a gentle slope.

② **NARROW:** Curve with a sharp slope.



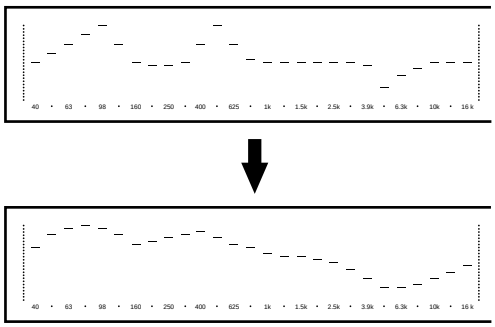
WIDE NARROW

●One adjusted, the curve remains the same until next time it is pressed.

8 When adjustment of center frequencies F2 and/or F3 is required:

Repeat steps 4 to 7 above for each center frequency.

When two curves F1 and F2 or three curves F1, F2 and F3 are set, the curve combining them will be displayed in a few seconds.



●For finer adjustment, perform the graphic mode operation described in the following page. →17

This mode allows to adjust the equalizer curve for each frequency band provided. The curve created in the parameter mode can be fine-adjusted in this mode.

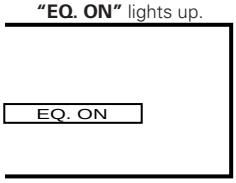
Operation in GRAPHIC mode

1 *Select the "graphic equalizer display mode".*

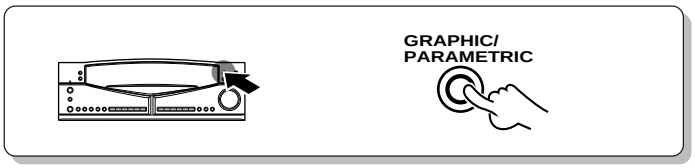
Each press switches the display modes as follows.
- ① Graphic equalizer display mode
- ② Spectrum analyzer display mode
- ③ DEMO(Demonstration) mode

2 *Select the "EQ.ON" mode.*

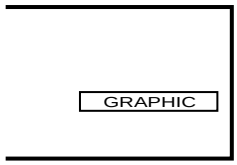
"EQ. ON" lights up.



3 *Select the "GRAPHIC" mode.*

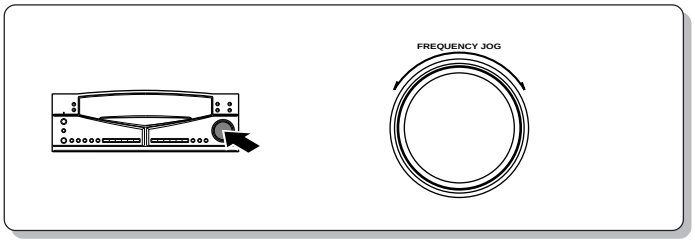


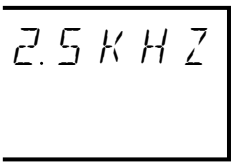
Each press switches the display as follows.
- ① **GRAPHIC** : Mode for adjusting equalizer curves.
- ② **PARAMETRIC:** Mode for creating a curve according to center frequencies.



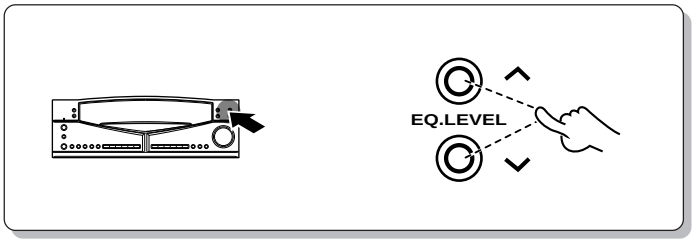
"GRAPHIC" lights up.

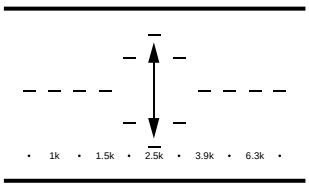
4 *Select the frequency band to be adjusted.*





5 *Adjust its level.*





6 *Fine adjustment of each frequency band:*

Repeat steps 4 and 5 above.

Note

If the mode is switched from **"GRAPHIC"** to **"PARAMETRIC"**, the equalizer pattern created in the **GRAPHIC** mode is cleared.

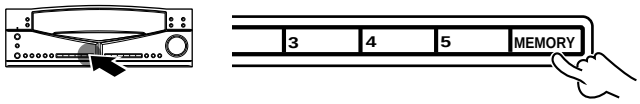
Registration of EQUALIZER pattern

1 Create a desired equalizer pattern.

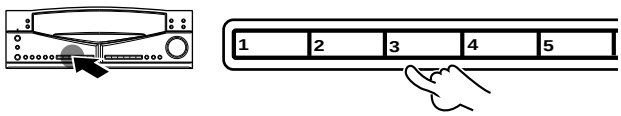
See "Creation of desired equalizer patterns". Any equalizer pattern can be preset if it is being displayed.

2 Preset the equalizer pattern.

❶ Press the MEMORY key.



❷ Press one of the preset keys.
Press while MEMORY is lighted up.



"MEMORY" Lights up.

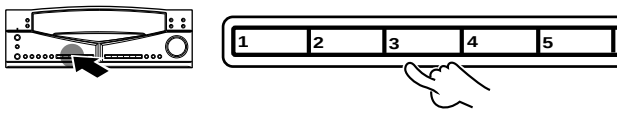
- Pattern is preset under the number of the numeric key pressed.
- Up to five patterns can be preset in the same manner.
- When a pattern has previously been preset under the numeric key pressed, the newly preset pattern replaces the previous pattern.

To cancel the registered pattern

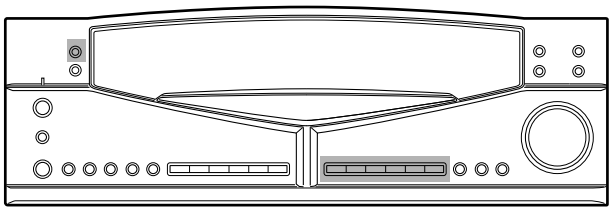
The registered equalizer pattern can be canceled and returned to the original pattern stored under the preset key (one of the factory-registered patterns M1 to M5 –14).

❶ Display the equalizer pattern.

❷ Press and hold the preset key for more than 5 seconds.



Through selections of the music genre, tone pattern and purpose of use in three steps, this feature allows to obtain the optimum playback pattern from the 90 equalizer patterns (6 genres × 5 patterns × 3 purposes of use=90).

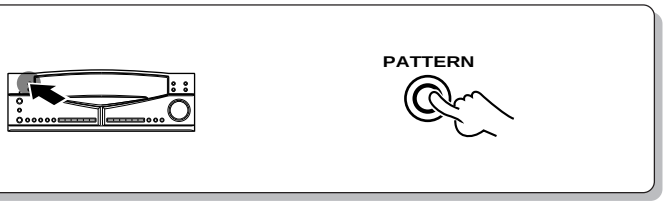


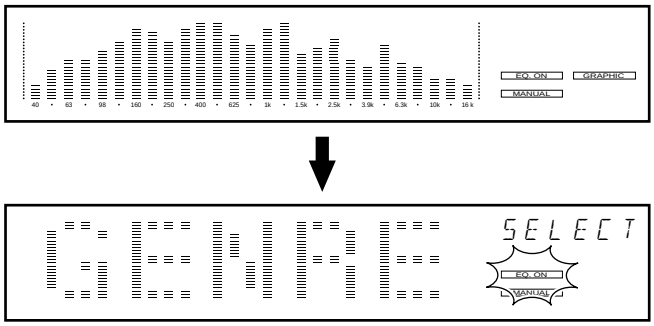
: Keys and control used in the operations described on this page.

Operation of GENRE feature

1 *Play a music source.*

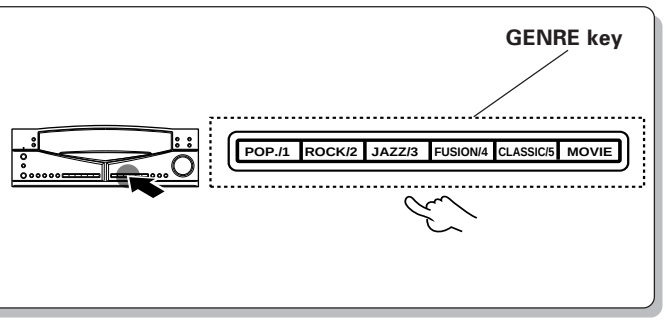
2 *Initiate the GENRE mode.*



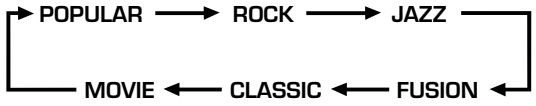


● **"GENRE"** is displayed and **"EQ.ON"** lights up.

3 *Select the genre of music.*



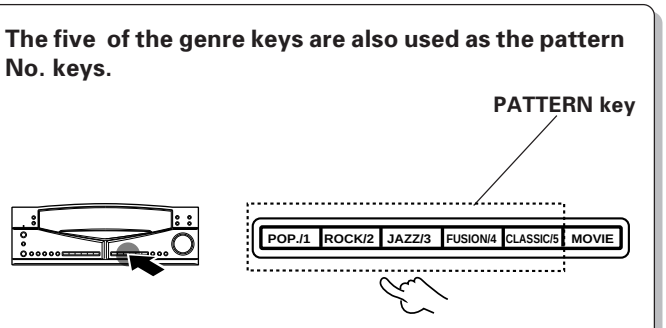
Until you actually select the music genre, patterns of the genres are displayed in repeated cycles (7 seconds) and the tones heard also change accordingly.



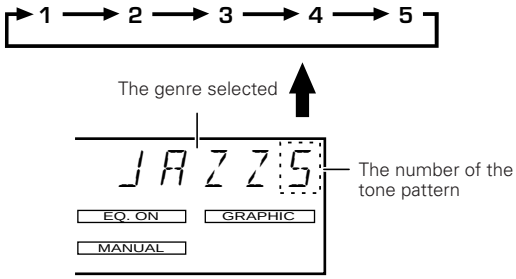
If the **PAUSE** key is pressed in step 3 or 4 the repetition of equalizer patterns stop so that you can check the tone of a specific pattern more in details. The repetitions resume when the **PAUSE** key is pressed again.

4 *Select the desired tone pattern.*

The five of the genre keys are also used as the pattern No. keys.



Until you actually select a tone pattern, the five patterns available with the genre selected in step 3 are displayed in repeated cycles and the tones heard also change accordingly. Five of the genre keys are also used as pattern No.keys.

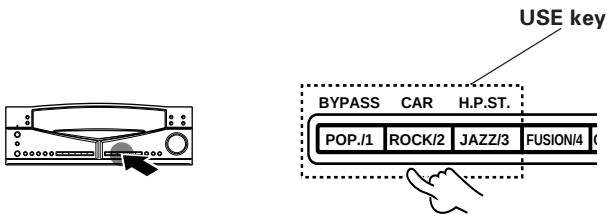


●After the tone pattern has been selected, characters **"USE"** appears on the display.

(Continued on next page)

5 Select the purpose of use of the pattern.

The three of the genre keys are also used as the use keys.



The display until you select a tone pattern.

Major purposes of use provided by the USE keys.

When a car stereo or headphone stereo is used, the special curve for use in recording is combined with the displayed curve. For recording sound together with the equalizer effect applied to it, see "Tape recording of sound with equalizer effect".

BYPASS key : For use in normal playback and recording.
CAR key : For use in recording of tapes to be played on car stereos.
H.P.ST. (Headphone stereo) key
: For use in recording of tapes to be played on headphone stereo players.

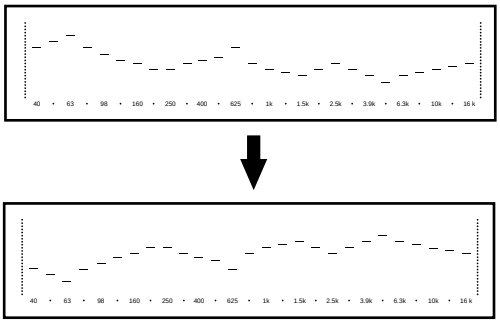
To cancel GENRE mode.

Press the PATTERN key again.

REVERSE key

Press the REVERSE key to reverse the equalizer curve.

Each press reverses the curve.

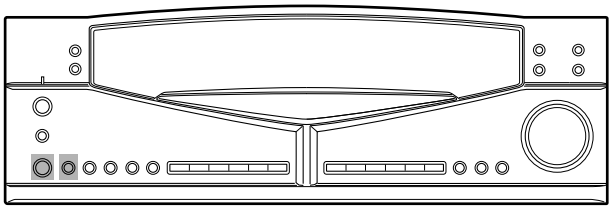


Use of equalizer effect with tape

Preparation

Make preparation for playback.

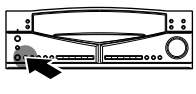
- For the preparation for playback, refer to the instruction manuals of the cassette tape deck.



: Keys and control used in the operations described on this page.

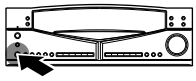
Applying equalizer effect to tape playback

1 Set the TAPE switch to ON.



Lights up.

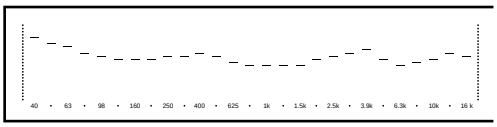
2 Select the "EQ.ON" mode.



"EQ. ON" Lights up.

3 Create a desired equalizer pattern.

See pages → 12 **to** → 20



4 Play a tape.

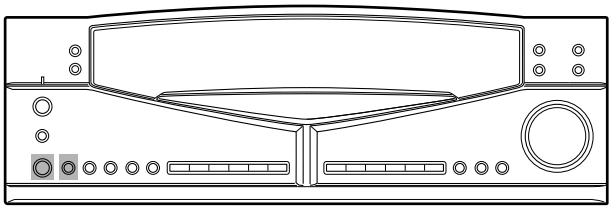
To stop tape playback

Press the stop key of the cassette tape deck.

Note

When playing a tape which has been recorded together with the equalizer effect, set the **EQ.EFFECT** key to OFF.

In addition to ordinary recording, special equalizer recording patterns (refer to page 14) can be used for effective playback on car stereo or headphone stereo.



: Keys and control used in the operations described on this page.

Preparation

Make preparation for recording.

- For the preparation for recording, refer to the instruction manuals of the cassette tape deck.

Tape recording of sound with equalizer effect

1 Set the TAPE switch to OFF.

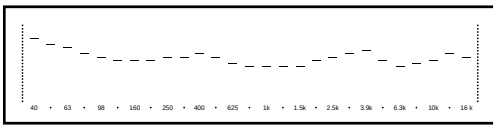
Turns off.

2 Select the "EQ.ON" mode.

"EQ. ON" Lights up.

3 Create a desired equalizer pattern.

See pages →12 to →20



4 Play the source to be recorded.

5 Start recording it onto tape.

To stop tape recording

Press the stop key of the cassette tape deck.

Functions of graphic equalizer

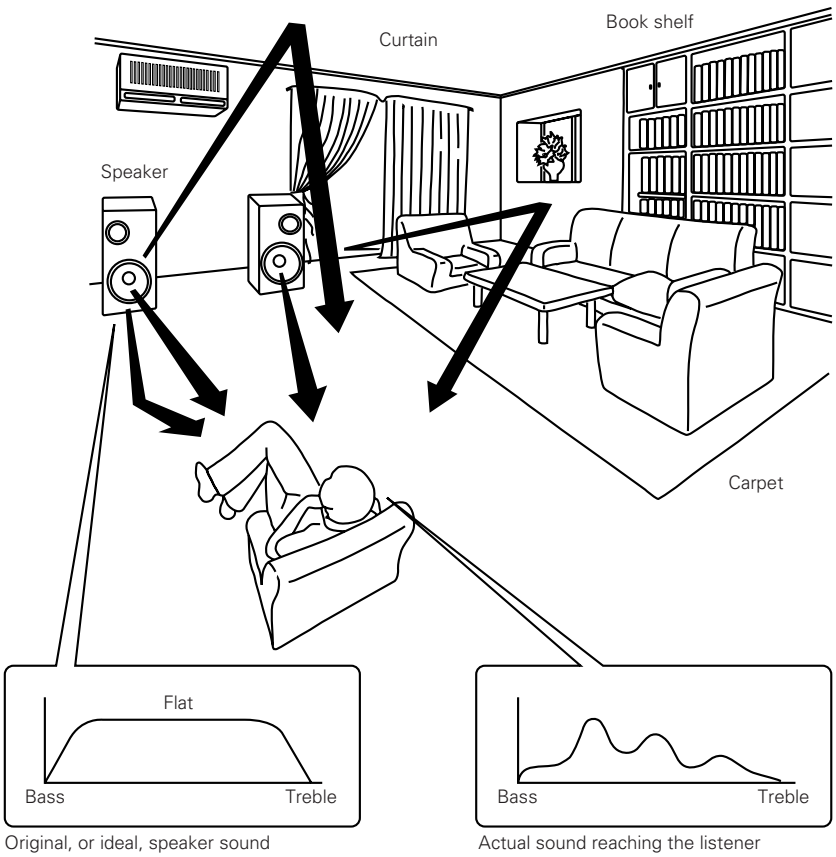
Compensation for the audio characteristics of the listening room

The listening room may contain several objects. Some of them reflect sound and some absorb sound , thus the sound reaching your ears is considerably affected by these objects.
In such cases, the graphic equalizer can be used to adjust the frequency response of the room for a flat response from low to high frequencies.

- Low frequencies are absorbed by beds, chairs, etc.
- High frequencies are absorbed by curtains, screens, etc.
- The room structure can cause the low frequencies to be unclear, or the sound level to increase or decrease depending on the frequency.

Adjustment of sound to your individual taste

When the reproduced sound contains several musical instruments and voices, the graphic equalizer allows you to enhance or attenuate the sound of specific instruments or voices.



Original, or ideal, speaker sound

Actual sound reaching the listener

Sound equalization

Super bass range (40 Hz ~ 63 Hz)
When this control is moved up, the bass instrument (double bass, bass drums, or pipe organ, etc.) sound is increased.
When the super bass sound is boomy, move this control down.

Bass range (98 Hz ~ 160 Hz)
Usually, the listening room resonance frequency is in this range.
To eliminate bass resonance, move this control down.

Mid-bass range (250 Hz ~ 400 Hz)
This range is the basis of music. Whether the sound is rich or not, depends on this range. When the playback sound is not so good, move this control up.

Mid range (625 Hz ~1 kHz)
When this control is moved up or down, the baritone or soprano voice is emphasized/de-emphasized. This range is related to the "presence" of music.

Mid-high range (1.5 kHz ~ 2.5 kHz)
This range is related to stimulus and metallic sound. When this range is well compensated, vivid sound can be obtained.

High range (3.9 kHz ~ 6.3 kHz)
This frequency range is related to the hardness of the sound. When this control is moved up, strings or brass instruments, such as flutes or piccolos, are emphasized. When the control is moved down, the sound will be more soothing.

Super high range (10 kHz ~ 16 kHz)
This frequency range is related to the details of the music. When this control is moved up, super high frequency instruments, such as triangles or cymbals, are emphasized, resulting in wide sound and echoes.

In case of difficulty

What appears to be a malfunction may not always be serious. If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

Operation to reset

The microprocessor may fall into malfunction (impossibility to operate erroneous display, etc.) when the power cord is unplugged while power is ON or due to an external factor. In this case, execute the following procedure to reset the microprocessor and return it to normal condition.

➡ **While pressing and holding the MEMORY key, press the MAIN POWER switch to OFF then ON again.**

●Please note that resetting the microprocessor clears the contents stored in, it returns the microprocessor to the condition when it left the factory.

Symptom	Cause	Remedy
Power fails to turn on.	●The power cord is plugged incompletely. ●The system control cord is not connected.	●Insert the power plug securely into the power outlet. ●Connect the cord properly by referring to **"System connections"**. →8
The equalizer effect cannot be obtained.	●The input and output connections are reversed.	●Connect the input and output correctly. →8

Specifications

⚠ ***Caution : Read this page carefully to ensure safe operation.***

[Audio block]

Total harmonic distortion (at 1 kHz, Flat) 0.005%
Frequency response ..... 10 Hz ~ 70 kHz, ± 3 dB
Signal to noise ratio (IHF '66) ..... 108 dB
Graphic equalizer characteristics
Adjustment center frequencies ..... 40 Hz, 63 Hz, 98 Hz, 160 Hz, 250 Hz, 400 Hz, 625 Hz, 1 kHz, 1.5 kHz, 2.5 kHz, 3.9 kHz, 6.3 kHz, 10 kHz, 16 kHz
Equalizer characteristic variable range .....± 12 dB
Input impedance
Line ..... 47 kΩ
Maximum output voltage (at 1% T.H.D.) ..... 7 V
Output Impedance
Line ..... 2.2 kΩ

[General]

⚠ **AC outlets**
For the U.S.A. and Canada
UNSWITCHED ..... 1 (200W, 1.6A max.)
For other countries
UNSWITCHED ..... 1 (200W max.)
Power consumption ..... 18 W
Dimensions ..... W : 400 mm (15-3/4")
H : 141 mm (5-9/16")
D : 385 mm(15-3/16")
Weight (net) ..... 4.6 kg (10.2 lb)

Notes

1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
2. The full performance may not be exhibited in an extremely cold location (under a water-freezing temperature).

For the U.S.A.

FCC WARNING

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment may cause harmful interference to radio communications, if it is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

–– Reorient or relocate the receiving antenna.
–– Increase the separation between the equipment and receiver.
–– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
–– Consult the dealer or an experienced radio / TV technician for help.

MEMO :

KENWOOD

For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model _____ Serial Number _____